

could allow the service provider to boost rates it charges companies for ads.

AOL, fearing it could be denied access to parts of the high-speed Internet market, is currently lobbying regulators to force AT&T Corp. and other cable providers to sell it access to cable data networks at wholesale prices. Microsoft Corp. last year took a \$ 5 billion stake in AT&T to ensure it has a place in high-speed cable access.

LANGUAGE: English

LOAD-DATE: January 10, 2000

XINHUA GENERAL NEWS SERVICE

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January 8, 2000, Saturday

SECTION: WORLD NEWS

LENGTH: 316 words

HEADLINE: AOL Demonstrates Internet Service on TV

DATeline: LAS VEGAS, January 7

BODY:

Internet giant America Online Inc. (AOL Friday showed a service that lets people use the Internet on their television sets at the ongoing 2000 Consumer Electronics Show (CES) here.

The new service, called **AOLTV**, would be transmitted through cable set-top boxes made by Philips Electronics and Hughes Electronics Corp.'s Direct TV satellite television.

"This is the biggest thing for us in 2000," said Carlos A. Silva Jr., vice president of the AOL devices division's product studio. "We are aiming on bringing the best of **AOL to the TV set**."

The new service, which will debut later this year, essentially allows you to surf the Web with your TV. AOL's service will also allow its members to chat with "buddies," as well as send and receive e-mail.

"All of our members tell us they want another way to be connected, besides the PC," said My-Chau Nguyen, vice president of marketing for the AOL devices division.

The Dulles, Va.-based company has been moving aggressively to bolster its "AOL Anywhere" strategy to extend its reach beyond the personal computer (PC). In December, it bought MapQuest, a leader provider of maps on the Internet that helps users look up directions and can be used with hand-held

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computers. The company also has developed software to adapt its interactive calendar and other features such as e-mailing to portable devices.

Analysts say AOL has two goals with its AOL Anywhere program - to be among the first to take advantage of consumers' desire to be connected on the go and to encourage subscribers to stay online longer, which could allow the service provider to boost rates it charges companies for ads.

While AOL stressed how the service was different from Microsoft's Web TV Networks Inc., industry experts say demonstrations left no doubt that Microsoft and AOL are once again ready to go head-to-head.

LANGUAGE: ENGLISH

LOAD-DATE: January 9, 2000

Newsbytes

January 7, 2000, Friday

LENGTH: 472 words

HEADLINE: AOL Makes Jump Into Non-PC Net Access Fray

BYLINE: Dick Kelsey; Newsbytes

DATELINE: LAS VEGAS, NEVADA, U.S.A.

BODY:

America Online is taking up a good share of the spotlight at the Consumer Electronics Show (CES) by the introduction of AOL-specific set-top boxes, signaling its long-anticipated step into the fast-growing frontier of non-PC access to the Internet.

AOL has been mum about its plans for main-service access from non-PC sources and Macintosh operating systems, but Chief Executive Officer Steve Case had promised that the move was imminent.

AOL spokesperson Anne Bentley told Newsbytes today that **AOL TV** will be available to members sometime later this year but she did not specify when. "We're simply here previewing **AOL TV** service and our partners Hughes, DirecTV and Philips," Bentley said at the CES in Las Vegas.

She would not comment on a Newsbytes report that AOL set-top boxes will be Windows CE-driven. If that is so, full AOL access from other devices propelled by Windows-CE may not be far off.

"Consumers want to access (the Internet) through television and if the set-top can do it, that's wonderful," said Kurt Scherf, an in-home networking analyst from Park Associates. "We're starting to see some companies come around to that. I think it's going to take some time. I think people are still a little gun shy."

"We forecast that broadband penetration by 2004 - DSL and cable modems - would be 24 million households," said Scherf.

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Home networking experts believe STBs will put Internet reach to the top of a TV set and more; **AOL TV** will establish new links among members. "You'll be able to know if you've got e-mail, what buddies you've got online," said Bentley. "You can easily chat with your buddies when you're watching sports, news or your favorite TV show."

Philips Electronics is offering an estimated 100,000 people at the CES a "sneak peak" at its receiver with **AOL TV**. Philips plans to develop an STB incorporating Microsoft's new WebTV featuring digital video recording (DVR) capabilities, Live TV Pause and optional Internet services. Today IGS Technology announced that its CyberPro 5000 video streaming media processor will be used in the Philips STBs for **AOL TV**.

TSBs and other non-PC devices will not only enable current e-mail users to access messages away from their computers, but will undoubtedly attract some of those without PCs who would like to send and receive e-mail.

Scherf said Parks' research suggests a 75 to 80 percent peak in home PC saturation, but believes set-top boxes and other home networking products will attract that segment without computers.

The Parks Associates Web site can be found at <http://www.parksaassociates.com>

Reported by Newsbytes.com, <http://www.newsbytes.com>

(20000106/Press contact, Kurt Scherf, Parks Associates, 1-800-PARKS11, Anne Bentley, AOL, 703-265-1746 /WIRES ONLINE, PC, BUSINESS/AOL-3/PHOTO)

LANGUAGE: ENGLISH

TYPE: NEWS

LOAD-DATE: January 7, 2000

USA TODAY

January 6, 2000, Thursday, FINAL EDITION

SECTION: LIFE; Pg. 3D

LENGTH: 645 words

HEADLINE: AOL's new screen name ends in 'TV' Service joins Microsoft in move to tube

BYLINE: Mike Snider

DATELINE: LAS VEGAS

BODY:

LAS VEGAS -- America Online wants to make the jump from your computer to your TV set.

The Internet access giant said Wednesday that it's teaming with

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electronics maker Philips for a set-top box that weaves the online service into TV signals.

It's not the only computer company taking up residence atop the TV. Microsoft, which already owns WebTV, announced its collaboration with Thomson/RCA on several projects, including a personal digital video recorder.

Both announcements were made in advance of the Consumer Electronics Show, which opens here today and runs through Sunday.

Cable and, more recently, satellites have transformed TV into a medium that can offer hundreds of channels. As online and wireless services migrate to the TV, the set could eventually offer millions of programming choices, AOL's Barry Schuler says.

"Television is at the beginning of a dramatic change. Ten years from now, it will be a completely different device," he says.
"TV is becoming more useful and fun."

The first **AOLTV** device (due in late spring or early summer; no price set) will connect to an antenna, cable or satellite feed, a phone line and a TV set. A setup procedure configures the AOL log-on process and an on-screen programming guide.

Users, armed with either a remote control or a keyboard, will be able to send instant messages to an online buddy, for example, while watching *Ally McBeal*. A subscriber's Buddy List could remain in the corner of the screen, alerting viewers when friends log on.

Many of AOL's functions will be translucently superimposed on the TV display. During e-mailing, the TV image is reduced to one-quarter of the screen. Web surfers can remove the TV image entirely if they choose.

"You are always watching TV, and we are not trying to turn your TV into a computer," Schuler says.

"Everything you have on AOL will automatically work on **AOLTV**."

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If you're watching CNN and hear about a company and want to buy stock, you can execute a trade."

One-fourth of AOL members combine TV viewing with their online activity, he says. **AOLTV** "is really a marriage of the connected lifestyle people have adopted."

The Thomson/Microsoft set-top box, the first product of the companies' relationship (Microsoft owns about 7% of Thomson), will offer WebTV's service and Internet access, plus an on-screen programming guide and a hard disk for storing and replaying video.

Thomson's Dave Arland says the product (due by Christmas, no price set) will be competitively priced with current personal video recorders, such as ReplayTV and TiVo, but "it's not just a VCR, which is kind of what it's been billed as before."

Eventually, Thomson plans to market products that offer digital recording for satellite and digital broadcast signals. As technology advances, the recording device would be integrated into the TV set itself, which would "completely do away with a (separate) recorder," Arland says.

Microsoft and AOL are logical partners for electronics companies "because you need a content provider," says Steve Booth of industry newsletter *Television Digest*. With 20 million members, AOL carries clout in the marketplace, he says, adding that "AOL is very good at making this simple."

Personal video recorders are expected to catch on this year. The devices digitally store information on a hard drive -- just as a PC does -- but instead of software and documents, the hard drive stores audio and video.

Other features include "instant replay" functions for broadcasts and the ability to pause live programming so "it keeps recording (and) when you come back, you start off where you left off," Booth says.

"A lot of retailers think that this is going to be the home-run product of next Christmas," Booth says.

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E-mail msnider@usatoday.com

GRAPHIC: PHOTO, B/W; Don't touch that dial-up: An AOLTV mock-up shows how the set-top box will integrate the online service with your TV, satellite or cable signal.

LANGUAGE: ENGLISH

LOAD-DATE: January 06, 2000

Cable World

December 13, 1999

SECTION: No. 50, Vol. 11; Pg. 10 ; 1042-7228

IAC-ACC-NO: 58411060

LENGTH: 567 words

HEADLINE: @Home's Web-TV Play.

BYLINE: BREZNICK, ALAN

AUTHOR-ABSTRACT:

THIS IS THE FULL TEXT: COPYRIGHT 1999 Intertec Publishing Corporation, A PRIMEDIA Co.

BODY:

Digital cable systems to test service in the spring

Plunging into the Internet/interactive TV market six months later than expected, Excite@Home Corp. will demonstrate its high-speed version of WebTV at the Western Show, and unveil two new MSO distributors for the service.

@HomeTV will compete against the existing Internet/interactive TV offerings of Microsoft Corp.'s WebTV, U S West Inc.'s WebVision, WorldGate Communications Inc. and Source Media Inc.'s Interactive Channel. It'll also vie for customers with America Online Inc.'s long-awaited AOL TV service and a proposed Web-over-TV service by Road Runner.

Excite@Home, which just reached 1 million subscribers for its high-speed online service over broadband cable lines, said it intends to start testing its fast, Web-over-TV service on digital cable systems in the spring. It then aims to launch @HomeTV commercially in at least one market next summer and expand to a number of digital cable systems next fall.

"We expect several MSOs to move into the market in the third or fourth quarter," said Kent Libbey, director-advanced TV products for Excite@Home. Although it's not yet clear which of the company's 24 cable partners will do so, it seems likely that lead MSO owners AT&T Corp., Comcast Corp. and Cox Communications Inc. will all introduce the service in their digital markets by late next year.

Designed to run on such cable set-tops as General Instrument Corp.'s DCT-5000 boxes, @HomeTV will offer a panoply of Internet/interactive TV features, including high-speed Web access, a Web browser, TV e-mail, enhanced TV programming, an advanced electronic programming guide, electronic chat sessions and personalized news and entertainment content. It'll offer additional online content supplied by Excite.

Excite@Home executives expect the full service to cost digital cable subscribers an extra 85 to 815 a month, depending upon the MSO. Current @Home PC customers may receive a discount. Some of the more

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elementary services, such as e-mail and selected Web pages, will likely be offered free, especially on lower-level digital set-tops.

Here's a Look at the Emerging Internet/interactive TV Marketplace

Service	Distribution	Existing/Potential Customers
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@HomeTV	Cable systems	1 million @Home PC subs
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WebTV	EchoStar,	900,000 current subs,
	AT&T,	3.2 million EchoStar homes,
	Rogers,	showcase cable systems
	Stand-alone boxes	

AOL TV	DirecTV,	7.8 million DirecTV homes,
	Stand-alone boxes	19 million AOL members

WebVision	U S West	25 million U S West customers
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WorldGate	Cable systems	11,400 current subs,
		12 cable systems

Service	Price
---------	-------

@HomeTV	\$ 5-\$ 15/month
---------	------------------

WebTV	\$ 21.95 or \$ 24.95/ month
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AOL TV	Estimated \$ 10-\$ 15/month
--------	--------------------------------

WebVision	\$ 19.95/month
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WorldGate \$ 7-\$ 12/month

SOURCE: Cable World research

LANGUAGE: ENGLISH

IAC-CREATE-DATE: January 6, 2000

LOAD-DATE: January 12, 2000

ANOTHER STORY FOUND OUT ON THE INTERNET

Forbes - Jan 10, 2000

TV or AOL TV? That is no longer the question

By Charles Dubow

NEW YORK. 1:50 PM EST-The giant \$350 billion merger announced today between America Online (nyse: AOL) and Time-Warner (nyse: TWX) is outsized in many ways, but one of the most interesting results is the impact that it will have on the nascent AOL TV project. For the past year, AOL has been aggressively trying to position itself to bring a television-like viewing experience to the mass market and has spent billions already in aligning itself with various DSL and satellite TV providers. But now for the first time, AOL has a coherent broadband strategy and the chance to extend its brand to television itself.

"This brings TV to AOL TV," said Cynthia Brumfield of Broadband Intelligence in Bethesda, Md. "They didn't have this before. They didn't have a TV distribution arm before and now they do. They also now are automatically buying themselves an instant TV content library that represents an aggregate of thousands of hours of television programming. It's mind-boggling."

AOL TV has been little more than a rumor. While the company was aggressively pursuing e-commerce strategies, it was more circumspect when discussing AOL TV. Barry Schuler, who headed the AOL TV project, was famously tight-lipped and maybe now it is easier to understand why.

The biggest question surrounding AOL TV was whether it would be a PC or a TV play. AOL, after all, was an Internet company. It had no television experience or properties. It was one thing to bring streaming video to the desktop, but without a cable partner it was still out in the cold.

It also jumpstarts Time-Warner's lackluster Internet efforts and gives its properties unparalleled exposure, thanks to AOL's hugely successful marketing machine.

The world's largest Internet service provider with more than 19 million paid subscribers, AOL has been lobbying the Federal Communication Commission (FCC) and local regulatory authorities to give it access to the cable pipe. That lobbying was just as strenuously fought by these same bodies as well as by many of the leaders in the cable industry, such as AT&T (nyse: T), Cox (nyse: COX) and Comcast (nasdaq: CMCSA), which had exclusive lock-up agreements with Excite@Home.

Time-Warner is the second-largest cable company in the U.S. and one of the owners of No. 2 broadband cable access provider Road Runner and has been notoriously quiet in the cable wars. It was seen as being less aggressive and outgunned by the Excite@Home coalition. Now that all changes. Not only can AOL-Time-Warner steal a march on Excite@Home and its backers; it also gives AOL instant carriage on Time-Warner's properties across the countries. With a little tweaking, every Time-Warner subscriber can now get AOL TV and Road Runner will be providing it.

Many questions of course, remain: Now that AOL has a TV presence, what will happen to its Internet

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strategy? Will the company migrate its subscriber to the television? What happens to Excite@Home? These and other questions will take several weeks or months to resolve, but one thing is for certain: The Internet and television will never be the same again

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Author: Dick Duncan at TINYNMD1
Date: 2/16/2000 11:53 AM
Priority: Normal
TO:
Subject: fyi

----- Message Contents -----

Time Warner's CNN Interactive to Be Feature on AOL's Netcenter

Dulles, Virginia, Feb. 16 (Bloomberg) -- America Online Inc. and Time Warner Inc. said Time Warner's CNN Interactive will feed news to two AOL Websites, an example of how the Internet and media giants will share products after AOL's record \$137.1 billion purchase of the world's largest media company.

Users of AOL's Netscape Netcenter and ICQ Web sites will be able to get news from CNN Interactive, a collection of news sites run by Cable News Network. CNN's trademark will be featured on the search and online community Web sites, which combined have 75 million registered users.

AOL, the largest online services, agreed Jan. 10 to buy Time Warner. AOL's more than 20 million subscribers will provide an audience for television programs from Time Warner's CNN, WB and other networks, Warner Bros. movies and magazine ranging from Time and Fortune to People and Sports Illustrated. America Online will get not only one of the premier media companies of the 20th century, but access to fast Internet-cable lines.

Dulles, Virginia-based AOL fell 1 5/16 to 52 5/8 in midmorning trading. Time Warner, based in New York, fell 15/16 to 79 9/16.

Feb/16/2000 10:33

For more stories from Bloomberg News, [click here](#).

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FOR PUBLIC INSPECTION

**Documents Submitted To The FCC By Time Warner Inc.
Document and Information Request No. 2
Documents Responsive to Questions Pertaining to
Memorandum of Understanding ("MOU")**

Jupiter Communications

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bandwidth &
access strategies

July 19, 1999
Joseph Laszlo
Scott Drobner

Leased Cable Access: Far from an Open-and-Shut Case

The debate surrounding the unbundling of cable networks heated up as municipalities took steps to thwart the cable broadband ISPs. Jupiter feels the opening of cable access will result from negotiation, not regulation. Web ventures should ignore the regulatory ruckus and continue building narrowband relationships.

core topics:

- Terrestrial Broadband
- Last Mile Strategies

All data, opinions, and projections are based on Jupiter's judgment at the time of publication and are subject to change.

- **Municipalities Assert Themselves, Vaguely.** Open cable access advocates claimed a victory as Broward County, FL, joined Portland, OR, in determining that multiple systems operators (MSOs) must open their data networks to competing Internet service providers (ISPs) as a prerequisite for license renewal or transfer. Several other cities, including San Francisco and Los Angeles, are deciding whether or not to include similar language in franchise transfer regulations. The Portland and Florida rulings, however, omit crucial economic and technological details of how unbundling would work in practice, creating what may well be an unenforceable mandate. Whether unbundling can work economically will be explored shortly in Canada, where regulators took steps requiring the presence of two cable ISPs in each MSO service territory. Any move to decide the terms of cable unbundling in the US will confront complex technical and pricing issues that will resist straightforward resolution.
- **Cable Unbundling Is Possible, but Not Plausible.** Adding fuel to the fire, America Online (AOL) and GTE conducted a two-month pilot program in Clearwater, FL, to test the feasibility of an open-access cable infrastructure. According to their claims, cable systems can open up their networks to other providers without intruding on the cable operators' network management. Jupiter believes this test fails to prove the feasibility of open access. The study did not address three key issues. First, the trial was conducted on an extremely limited regional demonstration of only 80,000 potential customers, leading to questions of scalability. Second, open access will likely create problems with head-end provisioning. The shared cable infrastructure creates a dire need for a distributed network (i.e., proxy servers and/or caches). It may prove impossible to provision sufficient equipment for multiple ISPs in typically cramped cable head-ends. Finally, the introduction of third-party connections adds layers of complexity to customer service and technical support functions as well as to data routing—potentially reducing end-user bandwidth. Jupiter questions bald assertions from MSOs that it is technically impossible to allow multiple ISPs to share the cable infrastructure. The issues above would probably be costly to overcome, but they are not insurmountable.
- **Unbundling Will Come from the Negotiating Table.** Jupiter believes that the Federal Communications Commission (FCC) will prevail over the assertive municipalities. A balkanized regulatory structure for broadband services, in which each city imposes its own rules on pipe owners, makes a national deployment strategy virtually impossible and threatens continued consumer rollouts far more than ISP exclusivity does. Jupiter foresees, however, that within the next two years, major dial-up ISPs and MSOs will come to mutually beneficial agreements via negotiation, wherein ISPs such as AOL would gain access to cable customers for \$25 to \$30 per month. This would likely spur greater penetration, because converting AOL's 17 million subscribers into

potential users of cable access would bring significantly more subscribers and revenues to MSOs than an offering that includes only one cable ISP.

- **Cable Competition a Mixed Blessing for Web Ventures.** The market dominance of @Home and Road Runner means that Web ventures will continue to pay hefty premiums for the privilege of partnering with cable ISPs. The novelty and appeal of broadband access have led some online ventures to contemplate such a partnership, yet most would do much better to stick with traditional narrowband ISPs or portals. Web ventures should not forget that AOL added 1.8 million new subscribers in the first quarter of 1999 alone—three times the number of subscribers that all cable ISPs have acquired in the US in the last three years. The slow emergence of ISP competition in the cable broadband arena will likely benefit Web ventures by reducing partnership premiums, but at the same time it will also fragment the broadband audience, making it more difficult to reach critical mass.

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Florida Cable Telecommunications Association

Steve Wilkerson, President

September 17, 1999

BY HAND DELIVERY

Mario E. Goderich, Director
Consumer Protection Division
Miami-Dade County
140 W. Flagler St., Ste. 901
Miami, FL 33130-1561

RE: Written Comments of the Florida Cable Telecommunications Association
regarding the Proposed Miami-Dade County Ordinance relating to Forced Access

Dear Mr. Goderich:

Enclosed please find a copy of the Florida Cable Telecommunications Association's (FCTA) written comments regarding the proposed Miami-Dade County Ordinance relating to access to broadband Internet access transport services. As you are aware, the FCTA is a Tallahassee-based trade association representing nearly all of Florida's franchised cable operators, including Adelphia Communications, AT&T Broadband and Internet Services, CableVision Communications, and MediaOne in the Miami-Dade County area. We are looking forward to participating in the workshop on September 23, 1999, and hope that these written comments along with any oral presentations on September 23rd will help lead to a better understanding of this issue by the Commissioners.

As always, if you have any further questions, please do not hesitate to give me a call at 850/681-6788.

Sincerely yours,

Charles F. Dudley
Charles F. Dudley

310 North Monroe Street • Tallahassee, Florida 32301 • (850) 681-1990 FAX (850) 681-9676 • www.fcta.com

cc TO: Marc Applebaum
Gov. HEATZ
Lyndee Leary
FYE
9/21/99

Sub: Forced
Access

cc: Doug
Semon

Mario Goderich
September 17, 1999
Page 2

cc: Steven E. Wilkerson, President, FCTA
Michael Gross, V.P., Regulatory Affairs, FCTA
Ken McNeely, V.P.-Florida, AT&T
Maureen O'Neal, General Manager, AT&T
Lynn Whisenhunt, General Manager, Adelphia Cable
Larry Brett, Adelphia Cable
Tony Bello, CableVision Communications
Jon Kruecher, V.P. Legal & Public Policy, MediaOne

WRITTEN COMMENTS

OF THE

**FLORIDA CABLE TELECOMMUNICATIONS ASSOCIATION
ADELPHIA COMMUNICATIONS
AT&T BROADBAND AND INTERNET SERVICES
CABLEVISION COMMUNICATIONS
MEDIAONE**

TO THE

**MIAMI-DADE COUNTY BOARD
OF COUNTY COMMISSIONERS**

regarding the

**Proposed County Ordinance relating to
Access to Broadband Internet Access
Transport Services**

Prepared and submitted by:

**Charles F. Dudley, General Counsel
and Michael A. Gross, V.P., Regulatory Affairs
Florida Cable Telecommunications Association
September 17, 1999**

INTRODUCTION

The Internet has flourished because government has resisted the temptation to regulate it. Consequently, access to the Internet is one of the most competitive businesses in today's communications and information markets. For years, the only link to the Internet was provided by local telephone companies, such as BellSouth in Miami-Dade County. Over the last decade, numerous other providers of Internet access have entered the market. Satellite companies such as DirectTV, EchoStar and others offer high-speed Internet access to their growing base of cable television customers. Wireless firms focusing on both the commercial and residential markets also offer Internet access at speeds comparable to those offered by satellite providers, telephone companies and more recently, cable television providers. However, even with this growing competitive market for Internet access, nearly all consumers access the Internet via local telephone facilities. While satellite, wireless and cable television providers offer higher speed access than traditional telephone lines, BellSouth, GTE, and others have met this competitive pressure by rolling out higher speed telephone connections such as Digital Subscriber Lines (or "DSLs") and by entering into marketing agreements with the world's largest Internet providers, including America Online (or "AOL"), which is the overwhelming market leader with some 19 million Internet customers.

Nearly every week, the *Miami Herald* and other local news outlets report on further developments in technology and new offerings of high-speed Internet access services by local telephone companies, satellite companies, wireless companies, and cable television providers. These existing and new entrants into the Miami-Dade communications market are investing hundreds of millions of dollars to provide wireline and wireless high-speed Internet, video, and voice communications to residences and businesses in the County. As previously presented to the Commission, AT&T alone anticipates investing more than \$400 million in upgrading its newly acquired cable television networks in Miami-Dade County to provide high-speed Internet access, advanced cable television offerings, as well as local telephone service in competition with BellSouth and others. CableVision Communications is investing millions of dollars to upgrade its facilities and currently provides some customers advanced cable television offerings, high-speed Internet access, and telephone service. Similarly, Adelphia Communications is pushing forward with a multi-million dollar upgrade in South Miami-Dade County and is providing high-speed Internet access and advanced cable television services to many South Miami-Dade County customers.

In short, these local cable television companies and the myriad of communications competitors are investing in the infrastructure to make Miami-Dade County one of the leaders in information-age technology - providing a highly competitive market for services that will benefit the residential and business customers in the area and providing greater choice, advanced services, and price competition. The incentive for making these broadband infrastructure investments is the opportunity to compete in the free market and to win customers by providing the highest quality service possible at a competitive price.

However, economic competition begets political competition. The Miami-Dade Board of County Commissioners has been lobbied for months by competitors to the cable television industry to adopt an Ordinance which would seek to stifle their investment and competitive marketing efforts to provide the best quality service to the residents and businesses of Miami-Dade County. The cable television operators in Miami-Dade County lack any "market power" in any market for Internet access. This is a market still dominated by companies which provide Internet access utilizing the infrastructure of the local telephone company. Not surprisingly, it is those who control the Internet access service market who are leading the charge in asking this Commission to adopt an Ordinance designed to remove the economic incentive for Miami-Dade County's cable television operators to upgrade (or continue upgrading) their facilities to provide competition and choice in high-speed Internet access service. Clearly, there is no justification for adoption of the proposed Ordinance, especially if the goal of the Miami-Dade County Board of Commissioners is to provide an incentive for companies to invest in broadband communications infrastructure in Miami-Dade County and to provide more competition and choice for its residents and businesses in the growing broadband communications markets.

I. NO NEED FOR REGULATION

Generally, legislative bodies like the Miami-Dade County Commission adopt economic regulation to protect their citizens from abuses in the marketplace. Nationwide, cable television operators collectively have fewer than one million of the estimated 33-35 million Internet customers. One company, America Online (or "AOL"), has nearly 19 million Internet customers. In the Miami-Dade Internet access market, cable television operators have a negligible share of the market and in no way exhibit "monopoly power" over Internet access. Indeed, AT&T does not currently provide high-speed Internet access service in Miami-Dade County. Moreover, customers of high-speed Internet access services offered by CableVision Communications, MediaOne and Adelphia Communications have not petitioned nor asked this Commission to take action regulating their cable modem services.

The Federal Communications Commission (or "FCC") has been studying and considering adopting "forced access" regulations on the cable television industry over the last year. In late 1998, the FCC solicited comments from the communications industry and others regarding what steps need to be taken to foster the development of a competitive broadband access market in the United States. Companies such as GTE, AOL and others, who are here today petitioning the Miami-Dade County Commission to adopt the proposed Ordinance, spent months lobbying the FCC to recommend and adopt similar regulations as part of the FCC's Section 706 Broadband Deployment Study. In February 1999, the FCC released its report and declined at that time to adopt any "forced access" regulations on the cable industry, citing the nascent nature of the high-speed broadband Internet access market, as well as the presence of numerous competitors (both wireline and wireless) in the marketplace. The Commission also discussed its concern for the impact of such regulation on the investment opportunities of the cable television industry and how the regulations could create a disincentive for the cable industry to finance and build the broadband infrastructure necessary to provide competitive high-speed Internet access and local competitive telephone services. In April 1999, in reviewing the proposed AT&T/TCI merger, the

FCC was again lobbied and asked to adopt "forced access" regulation on the cable television industry, especially in light of the supposed threat posed by AT&T's purchase of TCI. Again, the proponents of "forced access" lobbied the FCC to adopt such regulation as a "condition" of the AT&T/TCI merger. Following months of written comments and heavy lobbying, the FCC continued to stand by its earlier conclusions that such regulation was not needed and that the adoption of such regulation would do more harm than good. The FCC is again examining this issue for the third time in this calendar year in its review of the proposed AT&T/MediaOne merger. In addition, Congress is currently considering bills relating to competition in the provision of Internet access.

At the current time, the cable television industry and Wall Street financial analysts are comforted by the "hands-off" position adopted by the FCC. Clearly, given the interstate nature of the Internet as well as the myriad of regulatory issues associated with "non-discriminatory access," the FCC is the appropriate regulatory agency for this issue. Indeed, for the last several decades, the FCC, the courts, Congress, and state legislatures and public service commissions have wrestled with issues related to access to the local telephone network. Several FCC Commissioners (including Chairman William Kennard and Commissioner Michael Powell) have cited their desire for the development of a competitive market as the preferred model to regulation - necessitated because of the sole presence of one provider under the former local telephone company monopoly regime. These commissioners and other policy makers have expressed their preference for monitoring the development of the broadband Internet access market to encourage not only investment in infrastructure but to develop a market in which the customer has numerous choices for access to the Internet at varying speeds and at competitive prices.

In summary, there has been no demonstrated need for Miami-Dade County to adopt this proposed Ordinance at this time. The adoption of the Ordinance will only lead to costly litigation and regulatory battles before the Commission over the terms and conditions of the Ordinance. If the Ordinance were to become effective, it would require the creation and maintenance of a regulatory apparatus approaching that which the State and the FCC have implemented for regulation of the telephone industry. Moreover, adoption of the Ordinance would retard the deployment of advanced broadband services and future infrastructure investment in Miami-Dade County.

II. THE DETRIMENTAL EFFECT OF REGULATORY INTERVENTION ON INFRASTRUCTURE INVESTMENT

The adoption of the proposed "forced access" Ordinance would significantly chill the incentive for Miami-Dade County cable television operators to initiate and continue significant broadband facility investments. First, all of the cable television operators operating in Miami-Dade County are companies known as "multiple system operators" (or "MSOs"). These MSOs operate systems in communities throughout the United States. Each year, each of the individual systems competes within the MSO for the capital dollars necessary to initiate and continue broadband upgrades. While there are many factors influencing the allocation of capital dollars to

various markets, a favorable (or unfavorable) regulatory climate is probably the most significant factor--as it is for any other business. Further, unlike the local telephone networks which were built and financed under the protection of a grant of a legal monopoly and guaranteed rates of return, cable television facilities are built with private capital generated historically by equity investors and bank loans. While companies such as AT&T, Adelphia, CableVision and MediaOne are well-financed and respected in the financial markets, the adoption of a "forced access" Ordinance would undoubtedly increase the financing costs associated with the necessary upgrading of broadband facilities. Such increases would likely find their way to consumers.

Ironically, while GTE has been arguing to this Commission for forced access to cable's high-speed Internet access technology, it has been simultaneously arguing to the FCC that it should not be forced to provide its competitors access to its own DSL facilities used in providing high-speed Internet access. According to an FCC News Release (a copy attached) issued on September 15, 1999, GTE and other incumbent local exchange companies (ILEC) will not be forced to lease to competitors the facilities which the ILECs use in providing high-speed Internet access and other data services.¹ Further, a New York Times article (a copy attached) on the September 15th FCC Order, reported:

... GTE said they would lose the financial incentive to spend the hundreds of millions of dollars needed to deploy the new technology if, after making the investment, they had to sell those services to competitors at a discount.

The Federal Communications Commission sided today with the regional Bells and GTE, saying that any new regulations on high-speed Internet services could stifle investment in the new technology.²

GTE's position in the FCC docket referred to above clearly supports the cable industry's position herein and exposes the self-serving motives underlying GTE's duplicitous advocacy of forced access for cable operators.

In contrast, by rejecting the proposed "forced access" Ordinance, Miami-Dade County can send a positive signal to these and other communications companies as well as to the financial markets that it invites infrastructure investment and new technology deployment necessary for the County, its residents, and businesses to reap the benefits of a more fully competitive and

¹ FCC News Release issued on September 15, 1999, reporting Action by the FCC, September 15, 1999, by Third Report and Order and Fourth Further Notice of Proposed Rulemaking in CC Docket No. 96-98 (FCC 99-238).

² *F.C.C. Says Bells and GTE Needn't Share Internet Gear - Rivals Sought Low Cost Access to Services*; New York Times, September 15, 1999.

advanced broadband communications market. Further, the multiplier effect of the continuing investments by these companies on the Miami-Dade County economy is of particular significance, as many of these investments represent some of the largest private investments in the history of Miami-Dade County. Why risk the economic benefits of these investments by continuing to consider or adopting unnecessary regulations that are arguably outside the jurisdiction of the County and are better suited for disposition at the national level?

III. THE TECHNICAL FEASIBILITY OF FORCED ACCESS³

Although forced access under the proposed Ordinance may not be a technological impossibility, it is not technically feasible for numerous reasons, including the limited bandwidth of cable systems, unworkable points of interconnection, absence of technology to make the necessary equipment commercially available for large scale deployment, lack of space for collocation of necessary equipment, and insurmountable bandwidth management problems which would arise from sharing of bandwidth by multiple Internet Service Providers (ISPs). Cable systems have a limited amount of bandwidth capable of carrying cable services, requiring MSOs to make discretionary decisions concerning the limited combination of video programming, Internet services, digital cable, high-definition television, and telephony services that they deliver to their customers. The deployment of these service requires costly upgrades of the cable system, involving millions of dollars of investment and years of planning and implementation. Moreover, imposition of forced access would generate substantial additional costs to the MSOs

³ Assistance in preparing this section regarding the technical feasibility of forced access was provided by David Fellows, a consultant to the cable industry, and head of the DOCSIS Certification Board at Cable Television Laboratories (CableLabs). This Board decides whether a vendor's cable modem meets the criteria for receiving a CableLabs Certification label, facilitating retail sale of such modem. Mr. Fellows participated in the development of the DOCSIS specification, and headed the Steering Committee that oversaw this development. He is also chair of the Data Standards Subcommittee of the Society of Cable and Telecommunications Engineers (SCTE), and the American National Standards Institute, which is the accredited standards setting body for the USA. The SCTE has voted DOCSIS an American standard. Previously Mr. Fellows has been Interim Chief Technology Officer for the RoadRunner high speed data service, senior vice president of engineering and operations for MediaOne Express (MediaOne's previous high speed data offering, whose business was taken over by RoadRunner), and Chief Technology Officer for MediaOne (and Continental Cablevision before that). He was also a member of the technical staff at GTE Laboratories, and worked on the research which preceded the development of ISDN, xDSL, and fiber optics. He was VP of Product Development for GTE's telephone product division and VP/Technology for Siemens Transmission Systems, when GTE sold that division to Siemens, and has been President of Scientific-Atlanta's Transmission Systems Business Division. Accordingly, he is familiar with most aspects of cable television, Internet data, and telephone technology, products and services.

in the provision of Internet access and other services which in turn would increase the cost of these services to consumers. The proposed Ordinance would require the affected MSOs to grant access to an unlimited number of requesting ISPs. Consequently, the Ordinance on its face obstructs the MSOs' discretionary decisions as to the manner in which they will mix their programming choices, because they cannot predict the amount of bandwidth to allocate to accommodate the Ordinance. The Ordinance frustrates the MSOs' ability to undertake these discretionary decisions, because, to provide access to any additional ISP, an MSO must allocate a quantified amount of bandwidth to carry the ISP's service, thereby proportionately reducing the amount of bandwidth available to carry its own programming. Another negative effect of carrying a large number of ISPs is a reduction in quality, including the speed of the MSOs' high-speed access to the Internet. If too much bandwidth is used by a large number of ISPs demanding carriage on the cable system, forced access would have the incongruous result of reducing the speed to the rate of present dial-up access to the Internet. This uncertainty also has an immeasurable disruptive effect on the planning of upgrades and deployment of new services, and ultimately a chilling effect on new investment. These and other issues are discussed in more detail below. At the outset, it is important to understand the configuration of a high speed network as a predicate to understanding why forced access is technically infeasible.

A. DESCRIPTION OF A HIGH SPEED DATA NETWORK

The Internet is formed by interconnecting many individual networks together in an International fabric. Large Internet Service Provider networks are interconnected at locations called Metropolitan Area Exchanges (MAE) and Network Access Points (NAP), and dozens of ISPs will be present at the major locations (there are about a dozen such locations in the USA). Networks may also have private peering locations (for example, MediaOne RoadRunner which serves homes in New England would want to interconnect with GTE BBN which serves businesses and universities in New England. To start with, the traffic was all hauled down to Herndon, VA to the interconnect point known as MAE East, then hauled back up to Boston. Eventually, as MediaOne grows, it would make sense for the two to trade traffic in Boston and avoid the round trip to Virginia). Between these national interconnect points, major ISPs will run redundant Internet backbones, as @Home and RoadRunner both do.

ISPs then run feeder networks that bring regional traffic into the national backbone. RoadRunner will take traffic from Miami, Orlando and Jacksonville through Atlanta to MAE East in Virginia. They will also take traffic through Dallas to MAE West in the Bay Area. Traffic from each of the metropolitan regions served is collected in a Metropolitan Area Network (MAN) before being fed to the national backbone. These MANs consist of a network (typically in a ring for redundancy) between all of an MSO's headends and hubs. Each location has a router to add and drop traffic from the homes in that hub onto and off of the MAN. The routers are connected to headend modems, i.e., cable modem termination systems (CMTS). One side of the CMTS connects to the MAN router, and the other side is a Radio Frequency (RF) signal, which is added to the video, telephone, and other RF signals (carriers) which might be present. This signal is fed into a fiber transmitter and brought to a pocket of roughly 500 to 2000 homes. Here the signal is converted to coax, and brought to the homes in the pocket. Inside the

home, part of the signal is split and sent to the TVs, and part is sent to a cable modem. A newly developed standard for cable modems is known as DOCSIS (Data Over Cable Service Interface Specification). At the home computer side of the cable modem, the data signal is 10 Mb/s Ethernet and transmitted to any computers in the home. Other versions of modems may plug directly into computer slots, or connect with USB (Universal Serial Bus).

A cable system is a two-way (analog or digital) delivery system, consisting of fiber and coaxial cable (known as hybrid fiber-coaxial cable or HFC). Signals between 54 MHz and the top end of the system (e.g., 750 MHz) are amplified and fed from the headend or hub toward the home, and signals between 5 MHz and 40 MHz are sent from the home toward the headend. A headend might serve about 500,000 homes, and it is connected to fiber hubs, each of which might serve 20,000 homes. At the fiber hub, video signals are taken off of the hub ring and fed to individual fiber nodes, each of which might serve between 500 and 2000 homes.

In the upstream (from the home) direction, not all of the 35 MHz which falls between 5 and 40 MHz is useable. Various portions of the upstream band are subject to interference from other sources - International AM radio (e.g. Voice of America), CB radio and several HAM frequencies fall between 5 MHz and 40 MHz. The upstream carriers (the signals you want) are arranged to avoid the most troublesome interference frequencies. Maybe a total of four 5 MHz signals can be used, each 5 MHz carrying a 10 Mb/s stream. Upstream bandwidth, therefore, is a very scarce and precious commodity. DOCSIS signals are typically between 2 MHz and 5 MHz wide, and their location differs from place to place (as does the interference). In the downstream (toward the home) direction, the spectrum is broken up into 6 MHz channels. Each channel can carry one analog TV signal, or one digital TV carrier that might have twelve standard definition or two high definition pictures, or one DOCSIS carrier with 10 to 38 Mb/s. All of the homes in the area served by one carrier from the CMTS share this bandwidth. One customer can send data at 10 Mb/s upstream, providing at that instant no one else is sending any data. If two customers want to send 10 Mb/s into a 10 Mb/s pipe at the same time, the service operator, e.g., @Home or RoadRunner, can program a couple of things to happen when they have control over the entire pipe. Each might get 5 Mb/s (they share), one might get 10 Mb/s and the other zero (presumably, one paid more for its connection and service), or it might be unpredictable (best-efforts service). As more fully explained in Section B, in the case of a cable network shared by multiple ISPs with no one in charge of the entire bit stream in a hypothetical forced access world dictated by the Ordinance, the actions of each ISP and the services it offers affect every other ISP on the channel in an unpredictable manner.

There are roughly 110 6 MHz slots in the downstream direction for video, Internet, and other services, and four 5 MHz slots in the upstream direction. The business arrangements between @Home and RoadRunner and the MSOs that use them differ slightly, but essentially, the MSO owns the cable modem (the customer will purchase the modem at retail with DOCSIS), controls the RF placement on the cable, and owns the CMTS. @Home and RoadRunner take over at the output of the CMTS, and own the router and the regional and national infrastructure. They also own and operate regional data centers (for content storage in server farms), and

manage the entire Internet Protocol (IP) infrastructure, even if owned by the MSO. So @Home and RoadRunner place IP addresses in the cable modems, and instruct the CMTSs how to handle the data. They also handle service inquiries (customers with problems), and develop or collect content. Other alternatives for a cable MSO (e.g. the ISP Channel or HSA Network) provide even more services, typically for the smaller operator. Thus, the current arrangements between @Home/RoadRunner and cable MSOs are not a simple division of transport services and Internet access.

A telephone network is quite different from a cable network. In a telephone network, separate wires are run from the central office or a subscriber carrier location all the way to a customer's home. Unbundling is relatively easy, since each customer has a dedicated line (piece of plant). Cable networks, in contrast, are completely shared. The coaxial distribution line which serves one customer's home is the same that serves his or her neighbor's home. The equivalent shared setup in the phone system was the party line - and it should be noted that party lines are not subject to unbundling in the telephone world. The telephone plant is a star network - the lines from the central office radiate out in a star fashion. The coaxial plant is a bus network.

B. TECHNICAL FEASIBILITY

The Ordinance requires the MSOs to provide access to any requesting ISP "subject to technical feasibility." The biggest problem with defining technical feasibility is the ambiguity inherent in the word "feasible." Many things are technically possible, and therefore feasible by one alternative definition, but they have scaling, economic or other problems that make them, by other reasonable definitions, infeasible. The Ordinance is vague and ambiguous as to whether technical feasibility means that any technology enables such possibilities without regard to cost, whether the MSOs' embedded equipment possesses the capability of carrying another ISP, or some other concept.

Cable MSOs hand the bit stream off to @Home and RoadRunner at every cable headend and hub. In our preliminary analysis, there are two points outside of the @Home and RoadRunner networks that appear to be potential locations for interconnecting ISPs in addition to the incumbent ISP: on the RF side of the headend modem (the CMTS), or on the network side of the CMTS. From there, it is @Home's and RoadRunner's network. For example, considering the network described above, the first point of possible interconnection is at a headend or fiber hub on the RF side of the headend equipment. **The problem with the RF side is that there are not enough channels to go around (if the number of ISP applicants, including the incumbent ISP, is greater than one or two, depending on the business plan of the particular MSO).** There is a CMTS located here, managed by @Home or RoadRunner (as two examples). An interconnecting ISP could connect another CMTS to the cable plant, and operate on a different frequency, communicating with the cable modems in its customers' homes. It is technologically possible to do this. However, as described above, there are about 110 downstream channels or frequencies, where this equipment could operate, on a 750 MHz system. Most of these channels are occupied by video signals. Since there are over 4000 current ISPs

nationally, and between 600 - 700 ISPs in the 305 Area Code, there are not enough available channels to feasibly take this approach. It is possible to give every ISP who shows up its own channel (at least for the first 110 channels or so on a 750 MHZ system), but if you have no room left for video, it is infeasible. Succinctly stated, it is feasible to give the first ISP a channel, but it becomes infeasible when two or more show up. In the upstream direction there are a very limited number of channels to be shared between high-speed data, telephony, system monitoring, video Impulse Pay-Per-View (IPPV), and other services under development, so this approach becomes even less feasible than the downstream approach. In addition, there is no room in the typical headend and hub for any more equipment (including all the new CMTSs that would be needed), in addition to the powering, fire control, 24-hour access, and other features required of networking equipment. Additionally, in both the interface on the RF side and the network side of the CMTS, each ISP would have to install its own router. In the final analysis, interconnection at RF is not feasible.

The next potential interconnection point is on the **network side** of the CMTS. All interested ISPs would share the downstream and upstream bandwidth, and share the CMTS. The problem with the network side is that you are running a shared network with no one in charge of the entire bit stream, i.e., the actions of each ISP and the services it offers affect every other ISP on the channel in an unpredictable manner. The interconnecting ISP would run its own network to the MSO's headend and hubs, install its own router, and connect to the CMTS. The first point to be made here is that the equipment must be DOCSIS. MSOs deployed proprietary systems until earlier this year, when the DOCSIS specification took effect and equipment became available. All new headend deployments are now with DOCSIS equipment (although proprietary modems are still being deployed to fill out previously launched proprietary systems). The DOCSIS downstream channel is between 28 and 38 Mb/s, shared between all of the modems in the fiber node. The problems with sharing the CMTS and HFC channels are more subtle, but just as debilitating. Instead of an RF channel (6 MHZ), an ISP can be given part of a bit stream. But each additional ISP interconnecting with the cable system will incrementally degrade the service received by every existing customer on that system, eventually leading to a cable delivered ISP service slower than a dial-up modem. This is no longer a Broadband service, and so is clearly infeasible. An alternative to this is to share the CMTS and bandwidth as described above, but not divide that bandwidth into fixed slices per ISP. If only one ISP's customer is using the channel, they get all of the bandwidth. The point is that it is possible that multiple ISPs can share a channel, i.e., each will get full access to all 10 Mb/s if none of the others are on, but if one ISP uses up all 10 Mb/s (e.g., by launching a streaming video service), and others get none, then it is not feasible, at least to anyone but the first. If all ISPs have their customers come on, and the bandwidth is divided between them, so the first ISP's video service does not work, that is feasible to all but the first. There are two issues with this: it can be very unfair, because other ISPs will be deprived of the amount of bits they expected; it will also prevent new services from being launched, because new services will not have the use of the bandwidth. If feasible is a tough term to define, fairness is even more problematic. With a shared, best-efforts service, the offering by each ISP detracts from the